DRILLS - SURFACE

A. Original Equipment Manufacturers (OEM)

The following OEMs offer noise controls for new drills. Local dealers should be contacted for availability and further details.

Manufacturer	Exhaust Mufflers	Cab with Acoustical Treatment for Medium and Large Drills	Other Treatments
Ingersoll-Rand	X	X	
Reed-Gardner/Denver	X	X	
Erie	X	X	
Tamrock/Driltech	X	X	
Joy Mfg.--Sullivan Industries	X	X	
Gill	X	X	

"X" indicates product availability.

For older drills without sound suppression, retrofit noise controls may be needed.

B. Retrofit Noise Controls

1. Medium and Large Size Drills:

   The following OEMs offer retrofit noise control packages. Local dealers should be contacted for availability and further details.

Manufacturer	Exhaust Mufflers	Cab with Acoustical Treatment for Medium and Large Drills	Other Treatments
Ingersoll-Rand	X	X	Barrier shield available for small drills
Reed-Gardner/Denver	X	X	
Drill Tech	X	X	
Erie	X	X	
Tamrock	X	X	
Joy Manufacturing	X	X	
Gill	X	X	

"X" indicates product availability.

The following illustrates the "do-it-yourself" approach:

For Medium and Large-Size Drills:

- Install an appropriate exhaust muffler if one is not present.

- Install an operator cab with acoustical treatment which is available from the OEM. In some cases, additional work may be required (e.g. relocating hoses or controls) before the cab can be installed. This will add to the cost of the retrofit installation. Some cabs may also be available through specialty cab companies.

2. Small-Size Drills (Air Tracks):

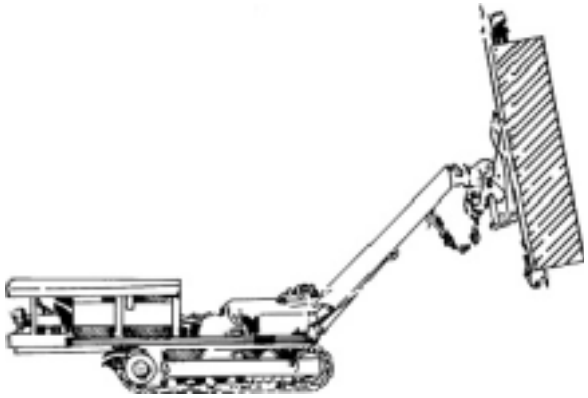
- Install an appropriate exhaust muffler, making sure it is matched to the engine specifications.

- Mount a barrier sheild on the drill mast. Install an angle iron framework to the mast of the drill and then cover the framework with material, such as conveyor belting or plywood. This creates an "acoustic shadow zone" at the drill controls. When the drill operator stands inside this "acoustic shadow zone," the noise levels are typically reduced by 4-10 dBA.

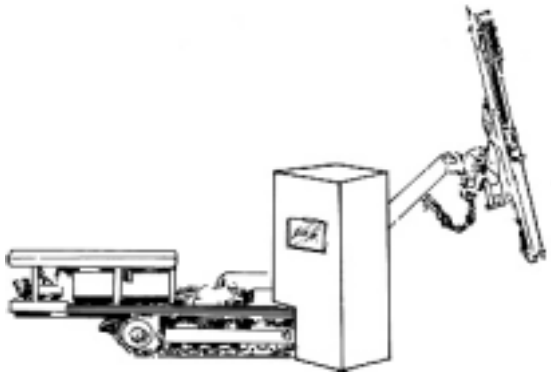
The following illustration depicts the barrier shield. For maximum effectiveness and safety, the barrier shield should be shaped as an "L" and extended from approximately

15 inches above the ground to 8 feet up the mast.

Construct an operator cab and install it on the drill unit. The cab can be constructed with sheet metal or flame-retardant plywood. Line the cab with an acoustical material.



Depending upon the specific drill, the cab can be attached to the drill unit at the mast or at the tramming controls. Once the drill steel is started, the drill operator moves into the cab to observe the drilling. In some situations, automatic drill steel changers are used which allows the drill operator to remain in the cab for longer periods of time. Typical noise reductions can be 10 dBA or more. We have not observed any instability or balance problem associated with the cab mounted on the drill unit. The following illustration depicts one of these “do-it-yourself” operator cabs.



C. Alternative Technology

Some small-size drills can be equipped with umbilical or radio-remote controls. Using this approach, the drill operator is relocated to a distance from the drill in an area of lower noise levels. Contact the OEM for the availability of this technology.